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Appl. No. 09/629,747
Amdt. dated January 12, 2005
Reply to Office Action of October 28, 2004

Remarks

The present amendment responds to the Official Action dated October 28, 2004. The Official Action rejected claims 1-3, 6-9, 12, 13, 16, and 19-20 under 35 U.S.C. §103(a) based on Walker et al. U.S. Patent No. 6,567,787 (Walker). Claims 4, 5, 10, 11, 14, 15, 17, and 18 were rejected under 35 U.S.C. §103(a) based on Walker in view of Green WO 97/13229 (Green). These grounds of rejection are addressed below following a brief discussion of the present invention to provide context.

Claims 7, 13, 16, 19 and 20 have been amended to be more clear and distinct. Claims 1-20 are presently pending.

The Present Invention

Among its several aspects, the present invention provides methods and apparatus for tracking individual retail performance metrics occurring during a transaction at a point of sale terminal. A particular retail performance metric (RPM), for example, the time a system waits for or spends scanning a product, weighing a product, keying input to the POS terminal, or the like, is recorded. The particular RPM is determined based on the type of input received by the system, depending on whether the input received is related to scanning a product, weighing a product, keying input to the POS terminal, or the like. An RPM record, including the time and type of input received, is stored in a transaction log associated with an individual transaction entry and/or time type category. For each input received during a transaction, a separate RPM record is stored in the transaction log allowing individual RPMs to be tracked within the transaction.

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By way of example, an overall transaction in accordance with the present invention may include several different operations performed by a cashier who services a customer purchasing multiple items at a POS station. For example, some items may have attached bar codes for scanning by the POS station while other items, such as produce items, may require weighing by the POS station. Produce or items with defective bar codes may require the cashier to key in certain data. Each of the scanning events, weighing events, and keying events would result in separate RPM records being recorded in a transaction log and associated with a record defining the transaction. The tracking of these RPM records results in decomposing the overall transaction into subtasks of a finer level of detail. This finer level of detail advantageously helps identify deficiencies and potential problems at the POS station. For example, a record of a series of scans requiring an inordinate amount of time may indicate a cashier who needs more training or a scanner which needs cleaning or repair whereas an increase in overall transaction time would be indicative of a problem without indicating the specific area of a problem. Further, a particularly efficient cashier might achieve an overall transaction time that hid a particular problem by being more efficient than average on a number of subtasks.

In one aspect, the present invention relates to a computer implemented method of tracking retail performance metrics for subtasks associated with a transaction. An input indicative of an event occurring is received and a transaction entry or entry record corresponding to the input received is recorded. A retail performance metric record, including an identifier corresponding to the entry record, is recorded independent of the entry record. Typically,

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multiple events occur during the transaction, and multiple retail performance metric records for the transaction are tracked.

Typographical Errors in Claims 7, 13, 16, 19, and 20

During preparation of this amendment, several typographical errors have been noted and are hereby corrected. Claim 7 has been amended to insert the preposition "of" between the terms "plurality" and "retail." Claims 7, 16, 19, and 20 have been amended to replace the term "with" with "within" to correspond to the wording of claim 1. Claim 16 also has been amended to insert a space between the article "a" and "transaction."

Claim 16 also has been amended to replace the text "retail performance metric type" with the text "time type category" to be consistent with the computer implemented method of claim 13.

The Art Rejections

As addressed in greater detail below, Walker and Green do not support the Official Action's reading of them and the rejections based thereupon should be reconsidered and withdrawn. Further, the Applicants do not acquiesce in the analysis of Walker and Green made by the Official Action and respectfully traverse the Official Action's analysis underlying its rejections. As a general matter, it is noted that 35 U.S.C. §103(a) requires that an invention be considered as a whole. When so considered, the present claims are not obvious.

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Claims 1-3, 6-9, 12, 13, 16, and 19-20 were rejected under 35 U.S.C. §103(a) based on Walker. Walker describes a method and apparatus for determining whether a verbal message was spoken during a transaction at a point of sale terminal. To this end, Walker's system includes visually or aurally prompting a cashier to speak a verbal message. The visual prompt is given through a screen and the aural prompt is given through a speaker. Walker's system also receives an audio signal via a microphone or similar device to record the operator. Using speech recognition, Walker's system determines whether the spoken audio signal properly corresponds to the prompt. Walker, col. 2, lines 4-13.

In Walker's system, conventional databases such as a prompt database, an operator database, an inventory database, and a transaction database are utilized to store various prompts, operator information, inventory information and transaction information. Walker, col. 5, lines 24-27 and Fig. 2. The transaction database in Walker's system includes a plurality of records such as record 500 of Fig. 5, where each record defines a different transaction. Walker, col. 6, 53-57. Turning to transaction record 500 of Fig. 5, several fields are illustrated which describe what data is acquired during the transaction. The time field 506 identifies when the transaction occurred. The item fields 510, 512, and 514 contain the item identifier, description, price, and quantity to be purchased. See also Walker, Fig. 16. The transaction database used in Walker's system does not address tracking performance metric records such as time spent scanning, weighing, keying, and tendering within a transaction.

In stark contrast, the present invention tracks a plurality of retail performance metric (RPM) records for multiple events within a transaction. (emphasis added) More particularly, for

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each input received, such as an input resulting from a scan operation, a weighing operation, a key operation, or a tender operation, an RPM record is recorded. The stored records are associated for each event of a plurality of events occurring during a transaction at a POS station. (emphasis added) The tracking of these RPM records results in decomposing the transaction into a finer level of detail. Such fine details advantageously help identify deficiencies and potential problems at the POS station. For example, a record of a series of scans requiring an inordinate amount of time may indicate a cashier who needs more training or a scanner which needs cleaning or repair. Claim 1 reads as follows:

1. A computer implemented method of tracking a plurality of retail performance metric records within a transaction, each retail performance metric record being a function of a retail performance metric type and the time elapsed waiting for and receiving an input, comprising the steps of:
receiving an input indicative of an event occurring at a point of sale (POS) station during a transaction, wherein the event occurring at the POS station is a scan operation, a weighing operation, a key operation, or a tender operation;
recording an entry record indicative of the input received at the POS station during the transaction;
recording a retail performance metric record, the retail performance metric record being a function of the retail performance metric type and the time elapsed waiting for and receiving an input;
associating the retail performance metric record with the entry record; and
repeating the steps of receiving an input indicative of an event occurring at the POS station during the transaction, recording a retail performance metric record, and associating for a plurality of events during the transaction.

Walker does not teach and does not suggest "receiving an input indicative of an event occurring at a point of sale (POS) station during a transaction, wherein the event occurring at the POS station is a scan operation, a weighing operation, a key operation, or a tender operation," as claimed in claim 1. Walker does not teach and does not suggest "recording an entry record

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indicative of the input received at the POS station during the transaction,” as claimed in claim 1.

Walker does not teach and does not suggest “associating the retail performance metric record with the entry record,” as claimed in claim 1. See also claims 7, 13, 16, 19 and 20. Walker’s system merely tracks the price and number of items purchased and whether a prompt is spoken properly. In so doing, Walker’s system does not teach and does not suggest a structure or a method for tracking details associated with each scanning, weighing, keying, or tendering operation.

As detailed below, the Official Action misconstrues the claims and, as a result, fails to meet its burden of showing a prima facie case for obviousness. The Official Action relies on Walker at col. 6, lines 53-57 for purportedly teaching or suggesting “recording an entry record indicative of the input received at the POS station during the transaction” as claimed. Applicants respectfully disagree. The limitation “an entry record indicative of the input received” must be considered in the context of the claim as a whole. The previous limitation of claim 1 “receiving an input indicative of an event occurring at a point of sale (POS) station during a transaction, wherein the event occurring at the POS station is a scan operation, a weighing operation, a key operation, or a tender operation,” sheds light on properly interpreting the claim. “An entry record indicative of the input received” relates to “the event occurring at the POS station.” That event is “a scan operation, a weighing operation, a key operation, or a tender operation” so that each event occurrence results in an entry record. As seen in Fig. 3A, for example, there are separate records for each scan, key, and weighing event. Walker’s teaching regarding the tracking of spoken prompts by cashiers does not anticipate and does not make obvious the present claims.

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The Official Action relies on Walker at col. 5, lines 40-67 as purportedly suggesting the limitation "associating the retail performance metric record with the entry record," as claimed in claim 1. Applicants respectfully disagree. At that cited portion of text, Walker describes statistics associated with properly spoken prompts on a per cashier basis for a number of transactions and not retail performance metrics associated with scanning, weighing, keying or tendering within a transaction as claimed.

The Official Action relies on Walker at col. 9, line 65 – col. 10, line 5 as purportedly suggesting the limitation of "repeating the steps of receiving an input indicative of an event occurring at the POS station during the transaction, recording a retail performance metric record, and associating for a plurality of events during the transaction." Applicants respectfully disagree. Since Walker does not teach and does not suggest the other steps in claim 1, as described above, Walker cannot teach and cannot suggest repeating these same steps.

The Official Action relies on Fig. 3 of Walker where it specifies "number of transactions in which message spoken properly" as teaching "a retail performance metric record, the retail performance metric record being a function of the retail performance metric type," as claimed. Applicants respectfully disagree. To address the Official Action's misconstruction of the claim, the term "retail performance metric record" means a record resulting from a scan operation, a weighing operation, a key operation, or a tender operation and includes a retail performance metric record (RPM) type and an elapsed time for the operation to occur. The RPM type identifies specific information about the operation such as whether a scan resulted in an error, a cashier was prompted to perform a weighing operation, and the like. See Specification, page 17,

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line 17- page 18, line 17 and Fig. 3a. Unlike the roll up statistics of properly spoken prompts as disclosed in Walker, the present invention advantageously tracks to finer levels of detail for a transaction.

The Official Action admits that Walker does not teach using “the time elapsed waiting for and receiving and input” in a retail performance metric record as claimed in claim 1. However, the Official Action at page 4, lines 19-21 suggests that Walker’s “use of a predetermined event to end and define a period of time ending when an event occurs is so very similar to the applicant’s use wait time as a performance metric, that measuring the time for use as a performance metric does not present a new or novel functionality” and takes Official Notice that it is old and well-known in the art to compute a performance metric consisting of measuring the waiting time it would take for an event to occur. Applicants respectfully disagree and request that the Examiner cite prior art to support this position. As described above, the retail performance metric record which includes the limitation “time elapsed waiting for and receiving an input” is quite different than Walker’s roll up statistic on properly spoken prompts across numerous transactions. Thus, in the context of the claimed, the “retail performance metric record” limitation, Official Notice of the limitation “time elapsed waiting for and receiving an input” is improper. See also independent claims 7, 13, 16, 19, and 20 which include similar claimed features as claim 1 described above. Applicants previously traversed this rejection and again request clarification of the Examiner’s position regarding Official Notice. More specifically, Applicants request the Examiner to cite a reference or references which disclose calculating the time elapsed waiting for

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and receiving input wherein the input resulted from a scanning, weighing, keying, or tendering operation in order to calculate a retail performance record as presently claimed.

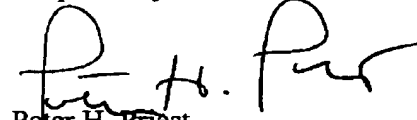
Dependent claims 4, 5, 10, 11, 14, 15, 17, and 18 were rejected under 35 U.S.C. §103(a) based on Walker in view of Green. Green fails to cure the deficiencies of Walker. Since claims 4, 5, 10, 11, 14, 15, 17, and 18 depend from and contain all the limitations of claims 1, 7, 13, 16, 19, and 20, as presently amended, claims 4, 5, 10, 11, 14, 15, 17, and 18 distinguish from the references in the same manner as claim 10.

The relied upon references fail to recognize and address the problem of tracking a plurality of retail performance metric records within a transaction in the manner advantageously addressed by the present claims. The claims as presently amended are not taught, are not inherent, and are not obvious in light of the art relied upon.

Conclusion

All of the presently pending claims, as amended, appearing to define over the applied references, withdrawal of the present rejection and prompt allowance are requested.

Respectfully submitted,



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